

## Water Crisis

The World's population has tripled during the 20<sup>th</sup> Century and the use of renewable water resources has multiplied by a factor of 6, mostly for agriculture. Moreover, the World's population is expected to increase by 50% over the next 50 years, leading to further growth in water requirements particularly in developing countries, both in rural areas for agriculture and in urban areas for industrialisation.

Major investments in the development of water resources in OECD countries and Asia have contributed to the improvement of food security, electricity production and economic growth in general, but today it is estimated that 1.4 billion people still do not have access to safe drinking water and 2.3 billion people do not have proper sanitation systems. The water crisis is especially important in sub-Saharan Africa, where only about 60% of the 680 million people have access to safe water supplies.

## Water and Sustainable Development

*"Water is key to sustainable development, crucial to economic, human and social development",* said H. E. Salim A. Salim, Africa's Water Ambassador at the Regional Stakeholders' Conference for Priority Setting held in Accra, Ghana in April 2002. The provision of safe drinking water and proper sanitation would have a major impact on health, reducing morbidity and mortality rates for water-related diseases by up to 80%. Provision of water for a more productive agriculture would contribute to food security and reduce poverty in rural regions.

In *"No Water, No Future"*, a contribution by HRH the Prince of Orange to the Panel of the UN Secretary General, presented at the fourth WSSD PrepCom in Bali, Indonesia in May 2002, it is reported that *"people in the worst-off 50 countries must try to meet all their water and sanitation needs on an average of 30 litres or less per day, far less than the 50-litre per day level considered by the United Nations as the absolute minimum for water needs. People in 13 countries, 9 of these from Africa, must try and live with an average of less than 10 litres per day, a truly desperate situation. They will never escape poverty if this issue is not solved"*.

A number of water targets and actions were proposed during the Johannesburg World Summit on Sustainable Development, in particular:

- to halve the proportion of people who are unable to reach or to

afford safe drinking water resources by 2015. This target is also one of the declared Millennium Goals

- to increase water productivity in agriculture (rain-fed and irrigated) to enable food security for all people without increasing the amount of water diverted for irrigated agriculture over that used in 2000.

## 2002 World Summit on Sustainable Development

The Johannesburg Plan of Implementation includes major resolutions related to the protection and the management of water resources. It also recognises that space-based techniques can be used for sustainable development and Article 27 specifically refers to water, space and developing countries: *"Improve water resource management and scientific understanding of the water cycle through cooperation in joint observation and research, and for this purpose encourage and promote knowledge-sharing and provide capacity-building and the transfer of technology, as mutually agreed, including remote-sensing and satellite technologies, particularly to developing countries and countries with economies in transition"*.

## The TIGER Initiative

Within the frame of the CEOS WSSD Follow-up Programme adopted in November 2002, the European Space Agency (ESA) has launched a new initiative which focuses on 'Earth Observation for Integrated Water Resources Management in Africa', called *'The TIGER Initiative'*.

In this context, close cooperation has been established with UNESCO. The TIGER Initiative will also contribute to the achievements of the objectives of the UNESCO IHP-VI 'Water Interactions Systems at Risk Social Challenges' 2002-2007 Programme, which aims at supporting the African countries in better managing their water resources.

The overall aim of TIGER is to facilitate the integration of space information and technology into hydrological and hydro-geological practices through:

- the coordination of relevant projects and activities in water-resources management where space data can provide a useful improvement to current practices
- the provision of Earth-observation data, capacity building and technical support in the development of Earth-observation projects.

TIGER comprises two major elements: (i) a set of individual demonstrator projects with a limited geographical coverage and scope, which are 'building blocks' of (ii) the political process, which aims at developing long-term, large-scale, sustainable information services for better decision making through the involvement of financing institutions and other partners who have a long-term strategic mandate related to development issues.

A Call for TIGER Project Proposals from the African region has been issued in May 2004. The response to this Call will be presented and discussed at TIGER 2004.

## Workshop Objectives

ESA organised two TIGER-related events in 2003, namely the first TIGER Working Meeting in May at ESA Headquarters in Paris for the preliminary definition of TIGER, and the first TIGER Workshop in October in Rabat, which officially kicked-off the Initiative. A regional Workshop was also held in February 2004 in Pretoria to identify Southern African user needs.

The Second TIGER Workshop, TIGER 2004, is being jointly organised by ESA, UNESCO, CSIR and DWAF in Pretoria, South Africa, from 8 to 10 November. The objectives for TIGER 2004 are to:

- assess the scientific understanding of hydrological processes and the capabilities of Earth Observation for integrated water-resource management in the African context
- identify requirements for education, training and capacity-building in relation to CEOS WSSD Module 1
- strengthen the dialogue with potential donor organisations regarding long-term objectives in the use of Earth observation for water-resource management
- update the African user community on the status of TIGER, with particular emphasis on the Call for TIGER-labelled projects and actions for 2005.

Topics addressed during TIGER 2004 will include:

- Aquifers
- Wetlands, including floods
- Food security, including droughts
- Epidemiology.



## Programme Outline

*Monday, 8 November 2004*

- Opening Session – Welcoming Addresses
- Water Needs – Challenges for Africa
- Science and Technology – Earth Observation for Water Resource Management

*Tuesday, 9 November 2004*

- Education, Training and Capacity Building (CEOS WSSD Module 1)
- TIGER-Labelled Projects – Progress on Existing Projects and Announcement of Recently Awarded Projects

*Wednesday, 10 November 2004*

- TIGER – Status and Plans
- TIGER – Way Forward
- Conclusions and Recommendations
- Closing Ceremony.

**An exhibition area, including poster-session space, will be made available to participants.**

## Practical Details

The working languages will be English and French. Simultaneous translation will be offered during the Workshop Sessions. Handouts and documents will be made available in either of the two languages.

Milestones for TIGER 2004:

- 30 April First Announcement by e-mail
- 15 May TIGER 2004 Website Open
- 1 July Call for Papers and Poster Exhibits
- 1 September First Draft Programme
- 20 September Registration by Participants
- 20 October Draft Final Programme.

In order to receive further information concerning TIGER 2004, you are encouraged to confirm your interest, preferably by e-mail, to:

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## Programme Committee

<b>ESA</b>	Josef Aschbacher (Chair), Micheline Tabache, Guy Duchossois, Jim Williams
<b>UNESCO</b>	Andras Szollosi-Nagy, Alice Aureli
<b>DWAF</b>	Eduarda Teixeira, Eberhard Braune
<b>CSIR</b>	Simon Hughes, Helena Bosman
<b>CRTS</b>	Driss El Hadani
<b>UN-ECA</b>	Stephen Donkor
<b>NEPAD</b>	Hesphina Rukato
<b>WRC</b>	Kevin Pietersen
<b>CEOS</b>	Yves Crevier (CSA), Chu Ishida (JAXA), Michael Hales (NOAA), Sergio Camacho (UNOOSA), Bruce Davis (NASA), Conrad Sebego
<b>EURISY</b>	Ambassador Walther Lichem

First Announcement

# TIGER 2004

## Space – Water – Africa

Pretoria, South Africa  
8-10 November 2004



Co-organised by



South African Department for Water Affairs and Forestry (DWAF)